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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,083	09/26/2003	Yann Le Gallo	60130-1896;02MRA0122	4699
26096	7590	04/27/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			ELLIS, SUEZU Y	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

14f

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/672,083	LE GALLO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Suezu Ellis	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on September 26, 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 26, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on September 26, 2003 and January 13 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 6, 7 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (US 6,271,512).

Regarding claim 1, Lewis discloses an obstruction detection system that includes a light sensor and a circuit (signal processor) that analyzes the light received by the light sensor and compares a distribution of the light (pattern) received by the sensor to a

reference distribution (pattern of light reflected when there is no obstruction in the plane of a window) (col. 2, lines 19-21, 33-38).

Regarding claim 4, 6 and 7, Lewis further discloses in Fig. 4 a receiver lens (62) in the path of the light received by the sensor (54). Lewis further discloses a light source (52) where the light source is an infrared light source (col. 6, lines 47-50).

Regarding claims 10 and 11, Lewis discloses in Fig. 1, an opening (open window), a moving openable member (closing window) in the opening and moveable to a closing line (top of window frame) where the openable member contacts the closing line, the openable member is in a closed position. In Fig. 2, Lewis further disclose a detection system that includes a light sensor (22) and a circuit (24) that analyzes light received by the light sensor where the circuit compares a distribution of the light received by the sensor to a reference distribution (col. 5, lines 18-22). Lewis further discloses the detector can cover an area approximate to the closing line (col. 5, lines 62-64).

Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Winston, Jr. et al. (US 5,410,149). Hereafter, Winston, Jr. et al. will be referred to as Winston, Jr.

Regarding claims 1 and 6, Winston, Jr. discloses an obstruction detection system in Fig. 1, comprising light sources (emitters – 10, 15) that create a plane of light at the floorline (reference distribution) and a light sensor (20) that detects a change in the received light pattern of the floorline (received distribution of light). He further discloses

a circuit that analyzes the sensor output signal for obstruction detection (col. 1, line 52 – col. 2, line 2) .

Regarding claim 2, Winston, Jr. further discloses the sensor may be a CCD (col. 2, line 66).

Claims 1, 5-7 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Connor et al. (WO 01/36772 A1). Hereafter O'Connor et al. will be referred to as O'Connor.

Regarding claims 1, 6 and 7, O'Connor discloses in Fig. 9, an obstacle detection system comprising a light emitter (IR LED) that transmits a patterned radiation field and a light sensor (receiver) that detects the received light (pg. 8, lines 21-27; pg. 14, lines 12-15). O'Connor further discloses and a circuit (controller) that compares the detected light to an initialization value (reference distribution) (pg. 13, lines 14-17).

Regarding claim 12, O'Connor discloses in Fig. 2A-2C, a method of detecting light along a closing line (20) of the openable member (closure - 12) to form a light distribution, comparing the light distribution along the closing line with a reference distribution (threshold), and indicating the presence of an obstruction (pg. 13, line 9 - pg. 14, line 6).

Regarding claims 5 and 13, O'Connor discloses in another embodiment that the circuit can be associated with a memory which updates acceptable range of times (reference distribution) that the window reaches a certain position in the aperture (pg. 21, line 22 - pg. 22, line 10).

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Diong et al. (US 5,489,891). Hereafter Diong et al. will be referred to as Diong.

Regarding claim 1, Diong discloses a control means of illumination in an intrusion or motion detection system. The control means includes the means to compare ambient light levels (distribution of light) with a pre-set threshold (reference distribution) (col. 2, lines 10-22). Thus a light sensor to detect the ambient light and a circuit to perform the comparison are inherent. Note, the obstruction detector mentioned in the preamble is considered an intended use since it is not specifically claimed, thus these feature will not be given patentable weight.

Regarding claim 5, Diong further discloses the control means has means sample the ambient light level at predetermined intervals in order to update the ambient light level information (col. 2, lines 19-22; col. 7, lines 49-51).

Claims 1, 4-7 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Chapdelaine et al. (US 6,157,024). Hereafter Chapdelaine et al. will be referred to as Chapdelaine.

Regarding claims 1, 6 and 7, Chapdelaine discloses in Fig. 9, an obstacle detection system comprising a light emitter (IR LED) that transmits a patterned radiation field and a light sensor (receiver) that detects the received light (col. 7, lines 22-27; col. 10, lines 9-15). Chapdelaine further discloses and a circuit (controller) that compares the detected light to an initialization value (reference distribution) (col. 9, lines 48-52).

Regarding claim 4, Chapdelaine discloses the light emitter and light detector can share a common lens (col. 8, lines 15-18).

Regarding claim 12, Chapdelaine discloses in Fig. 2, a method of detecting light along a closing line (20) of the openable member (window - 12) to form a light distribution, comparing the light distribution along the closing line with a reference distribution (threshold), and indicating the presence of an obstruction (col. 5, lines 13-20).

Regarding claims 5 and 13, Chapdelaine further discloses the controller storing the difference between the receiver output and the threshold in order to detect drift in the receiver output in the absence of an object. He further discloses the receiver output comprises of prior uses of the monitoring system that did not report the presence of an object and that the number of prior uses may change, thus in order to accurately detect the drift, the stored difference (reference distribution) is inherently updated.

Claims 1, 6-7, and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by O'Connor et al. (US 20040056199). Hereafter O'Connor et al. will be referred to as O'Connor.

Regarding claims 1, 6 and 7, O'Connor discloses, an obstacle detection system comprising a light source (light emitter) that transmits a patterned radiation field and a light sensor (photodetector) that detects the received light [0046]. O'Connor further discloses that the detector compares the light distribution (resulting signal) to predetermined threshold (reference distribution) [0048]; [0053]. A circuit is inherent to

the detector in order to perform the comparison. O'Connor further discloses the light source is proximate to the sensor in Fig. 1. He further discloses the detection system is an IR system, thus the light emitter is an infrared light source [0040].

Regarding claims 15-16, O'Connor further discloses that the detection system can measure the amount of ambient light (abstract, [0023]). He further discloses the integrating the ambient light over a period of time [0050].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winston, Jr. et al. (US 5,410,149) in view of Lewis (US 6,271,512). Hereafter, Winston, Jr. et al. will be referred to as Winston, Jr.

Regarding claim 3, Winston, Jr. addresses all the limitations of claim 1. A CCD inherently includes imaging elements. Winston, Jr. fails to expressly disclose that the distribution of light defines a histogram of gray levels of the plurality of imaging elements. Winston, Jr. and Lewis are directed to a similar problem solving area of detecting obstructions in a monitored area. Lewis discloses a graph that illustrates changes in light intensities (equivalent to gray levels) from obstructions, for an array of



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detector elements, or photodiodes (Fig. 5B and 5C – col. 7, lines 32 - col. 8, line 25).

Since imaging elements comprise of detector elements, it is obvious that the distribution of light defines a histogram of gray levels of the imaging elements.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diong et al. (US 5,489,891). Hereafter, Diong et al. will be referred to as Diong.

Regarding the limitations of claims 6 and 7, Diong does not expressly disclose an infrared light source, however it would have been obvious to a person of ordinary skill in the art to include this feature since it is well known in the art to use infrared light in motion or intrusion detection systems. The inclusion of an infrared light source would illuminate the monitoring/surrounding area to detect intruders (moving infrared radiation sources) (col. 2, lines 12-16) and have the light be invisible to the intruders. Regarding claims 8 and 9, Diong addresses all the limitations of claim 1. Diong discloses that a light source (LED) will activate (illuminate) whenever the ambient light intensity (received light) is below a predetermined level (col. 4, lines 20-25). In another embodiment, Diong discloses an alarm LED can be activated (switched on) at night (first threshold) and be deactivated as day breaks (second threshold) (col. 4, lines 26-34).

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapdelaine et al. (US 6,157,024). Hereafter Chapdelaine et al. will be referred to as Chapdelaine.


Regarding claims 16 and 17, Chapdelaine addresses all the limitations of claim 12 and discloses an embodiment where objects disposed in the area being monitored, the reflected radiation is lower than the alarm threshold as a result of the object absorbing part of the radiation (col. 11, lines 22-24). He further discloses that the controller can dispatch a signal to produce a visual alarm when the threshold value has been "exceeded" (col. 10, lines 48-62). It is common knowledge to include light source to produce a visual alarm, which in this embodiment, would be activated when the light received by the sensor is below a threshold. Thus, when the light received is above the threshold, the light source would be deactivated. Note, Chapdelaine further discloses the threshold can be a range of values (col. 8, lines 7-10), thus the threshold to deactivated the light source can be different than the threshold to activate the light source. Further, Chapdelaine discloses that the controller may rely upon a second threshold value (col. 17, lines 61-62), thus the threshold to deactivated the light source can be different than the threshold to activate the light source.

#### ***Telephone/Fax Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is 571-272-2868. The examiner can normally be reached on 8:30am-7pm (Monday-Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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